EVALUATION OF THE USE OF MIDLEVEL PRACTITIONERS IN STAFFING EMERGENCY DEPARTMENTS IN CRITICAL ACCESS VERSUS NON-CRITICAL ACCESS HOSPITALS IN MINNESOTA

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ABSTRACT

Rural Minnesota accounts for a large portion of both the geography and population of Minnesota. Difficulty recruiting and retaining medical staff to provide emergency health care along with the financial concerns of health care facilities are two major barriers to providing health care in rural communities.

The research question answered in this study was, "Are Critical Access Hospitals in Minnesota more likely to utilize midlevel practitioners to staff their emergency departments than Non-Critical Access Hospitals in Minnesota?" To determine the answer to this question, the researcher utilized a cross-sectional research design. A survey was developed to evaluate the emergency department staffing practices of Minnesota Hospitals. This survey was sent to the 142 hospitals in Minnesota and had a return rate of 68 percent. The results of the survey showed that 52 percent of Critical Access Hospitals were currently utilizing midlevel practitioners in their emergency departments whereas only 32 percent of Non-Critical Access Hospitals were currently utilizing midlevel practitioners in their emergency departments.

The level of satisfaction for hospitals using midlevel practitioners in the emergency department was rated at "completely satisfied or mostly satisfied". Only one Non-Critical Access Hospital rated satisfaction at "somewhat satisfied". The results were similar in both Critical Access Hospitals and Non-Critical Access Hospitals. Additionally, similar results were found in the level of satisfaction communities have with midlevel practitioners in the emergency department. A majority of communities rated their satisfaction at "completely satisfied or mostly satisfied". Only two communities were "somewhat satisfied". Once again, the results were similar in communities with Critical Access Hospitals and in communities with Non-Critical Access Hospitals.

The results also revealed that 85 percent of Critical Access Hospitals in Minnesota and 57 percent of Non-Critical Access Hospitals would consider utilizing midlevel practitioners to staff their emergency departments. Sixty nine percent of Critical Access Hospitals and 37 percent of the Non-Critical Access Hospitals cite a lack of physician support as the most significant barrier to utilizing midlevel practitioners in the emergency department.

It is recommended that information on the use of midlevel practitioners be made available to hospital administration and physicians to allow them to make an informed decision on the use of midlevel practitioners in emergency departments. One possible source for this information is the Office of Rural Health and Primary Care with the Minnesota Department of Health. Once the information is available, this study should be repeated in three to five years to re-evaluate the results. Since the urgent care departments were not included in this study, it is suggested that it be included in subsequent studies. This would be helpful to determine if those hospitals that have separate urgent care departments utilize midlevel practitioners to staff the urgent care even if they do not utilize them in the emergency department.

METHODOLOGY AND PROCEDURES

Problem Solving Methodology

This cross-sectional study included an anonymous questionnaire survey mailed in October 2003 to 142 hospitals in Minnesota. The list of hospitals was obtained from the Minnesota Department of Health facility database and therefore the list could not be manipulated by the researcher.

Procedures

A 29 question survey developed by the researcher was sent to all hospitals in Minnesota listed in the Minnesota Department of Health facility data base as of September 1, 2003. No numbers or identifying data were included on the survey to maintain confidentiality.

The surveys were sent out in a mass mailing on October 15, 2003 and participants were given until November 15, 2003 to return the survey. On October 22, 2003, a reminder postcard was mailed to all 142 hospitals. The participants were given until March 31, 2004 to return the postcard for a copy of the results.

At the end the data collection time, the surveys were separated into two groups; those from Critical Access Hospitals and those from Non-Critical Access Hospitals. The survey data was entered into a database established in Excel 2000. Questions and responses of all valid surveys were included in the database.

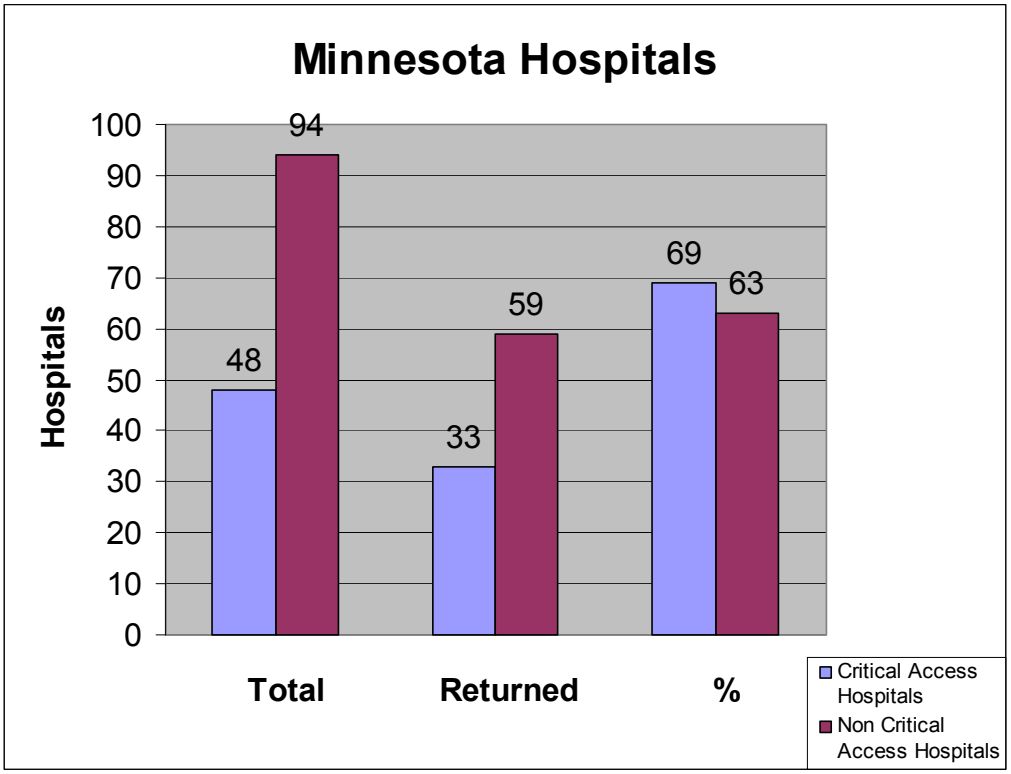
The data collected and analyzed for this study was used to determine if there is a relationship between a Critical Access designation and the use of midlevel practitioners in the emergency department.

RESULTS

The purpose of this study was to determine if Critical Access Hospitals in Minnesota were more likely to utilize midlevel practitioners to staff the emergency department than Non-Critical Access Hospitals in Minnesota.

Of the 142 surveys that were mailed to Minnesota hospitals, 97 were returned for a response rate of 68 percent. Only one survey was excluded from the study because it contained conflicting data. Three surveys were returned uncompleted with notations that their hospitals had closed. Two hospitals returned the uncompleted survey indicating that they did not have emergency departments. This left a total of 91 usable surveys from which the data was compiled.

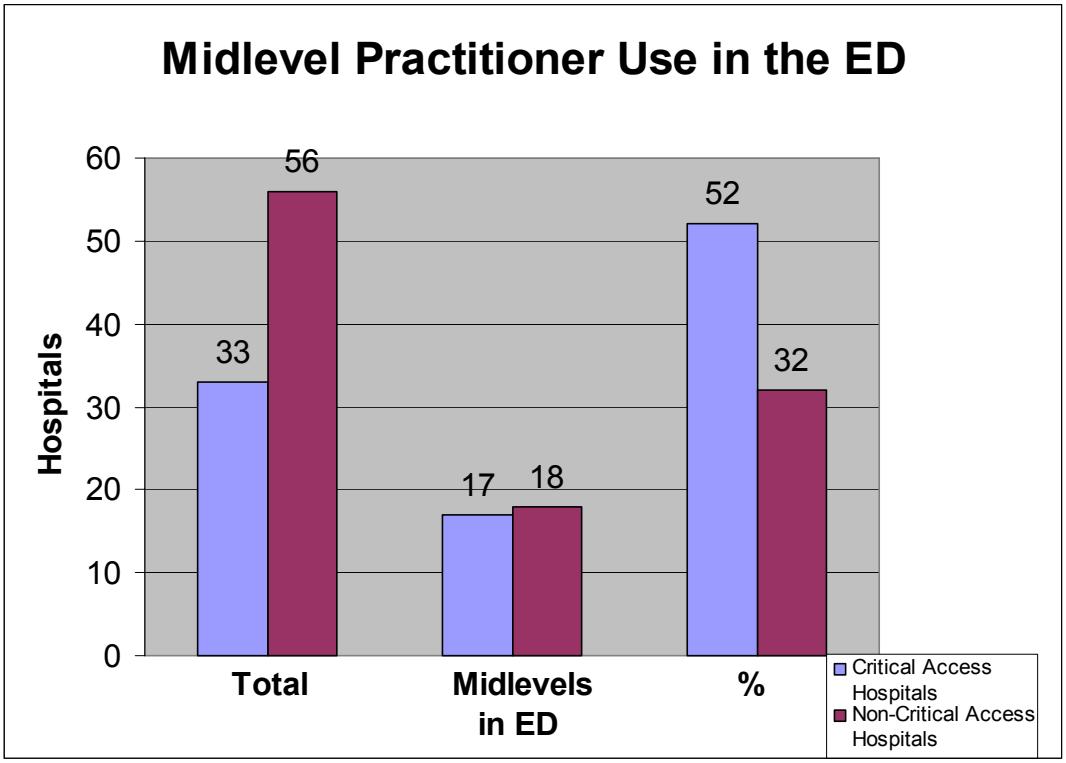
Graph 1



The completed surveys were divided into two groups. One group included all surveys from Critical Access Hospitals and the other group included all surveys from Non-Critical Access Hospitals. As of September 1, 2003, there were 48 Critical Access Hospitals in Minnesota; 33 of 48 surveys were returned for a response rate of 69 percent. The remaining 94 surveys were sent to Non-Critical Access Hospitals; 59 were returned for a response rate of 63 percent.

All 33 Critical Access Hospitals responding to the survey had emergency departments that were open 24 hours a day, 7 days a week. Of the 58 usable surveys received from Non-Critical Access Hospitals, only two hospitals did not have emergency departments. The remaining 56 hospitals had emergency departments that were open 24 hours a day, 7 days a week.

Graph 2



Based on the survey results, 17 of 33 or 52 percent of Critical Access Hospitals currently utilize midlevel practitioners in their emergency departments. Eighteen of 56 or 32 percent of Non-Critical Access Hospitals currently utilize midlevel practitioners in their emergency departments.

Table 1. How long has your facility utilized mid level practitioners to staff the ED?

	Critical Access Hospitals (n = 17)	Non-Critical Access Hospitals (n = 18)
Less than one year	1	1
1-3 years	5	6
4-6 years	5	4
7-10 years	4	3
More than 10 years	1	4
Other	0	0
Did not answer	1	0

The survey data show that both Critical Access Hospitals and Non-Critical Access Hospitals have utilized midlevel practitioners in the emergency department for similar lengths of time, although the Non-Critical Access Hospitals have utilized a higher number for a greater length of time.

Table 2. Type of physician supervision provided for midlevel practitioners in the ED

	Critical Access Hospitals (n = 17)	Non-Critical Access Hospitals (n = 18)
Physician in house, in the ED	1	12
Physician in house, not in the ED	1	1
Physician on call	14	5
Other (All the above)	1	0

Critical Access Hospitals were much less likely to have a physician in house while midlevel practitioners were staffing the emergency departments than Non-Critical Access Hospitals. The study suggests that since Non-Critical Access Hospitals generally have a higher number of emergency department visits, more than one practitioner is needed to staff the emergency department. This would be one possibility for the difference in the level of physician supervision.

Table 3. Level of organization satisfaction with midlevel practitioners in the ED

	Critical Access Hospitals (n = 17)	Non-Critical Access Hospitals (n = 18)
Completely Satisfied	7	7
Mostly Satisfied	10	10
Somewhat Satisfied	0	1
Satisfied	0	0
Dissatisfied	0	0
Somewhat Dissatisfied	0	0
Mostly Dissatisfied	0	0
Completely Dissatisfied	0	0
Unsure	0	0

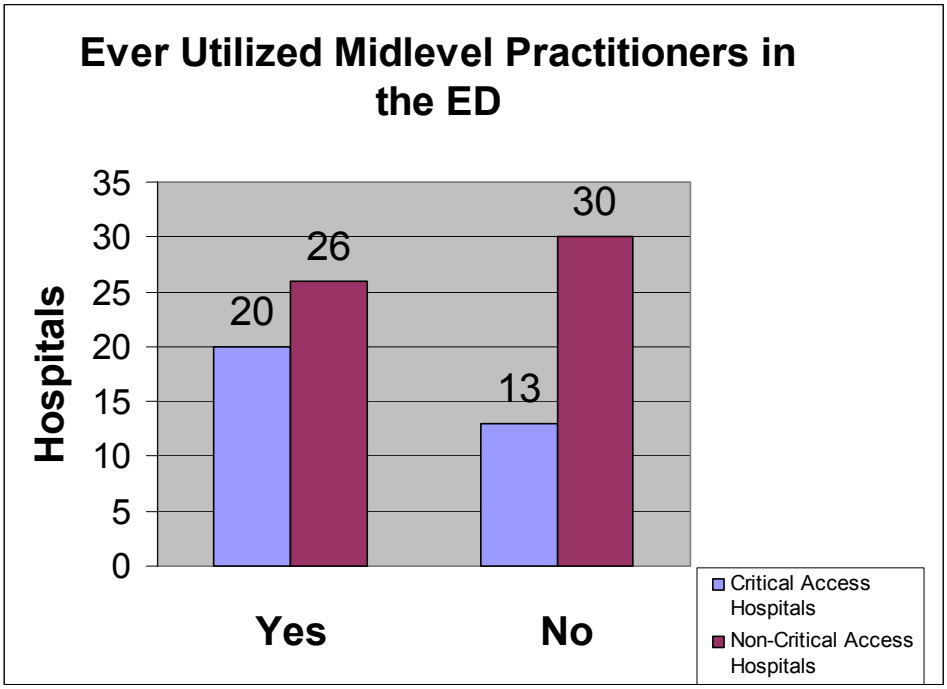
The data shows that an overwhelming majority of both Critical Access Hospitals and Non-Critical Access Hospitals were either mostly or completely satisfied with midlevel practitioners in the emergency departments. The level of satisfaction was similar among Critical Access Hospitals and Non-Critical Access Hospitals. None of the hospitals were dissatisfied with midlevel practitioners in the emergency departments.

Table 4. Level of community satisfaction with midlevel practitioners in the ED

	Critical Access Hospitals (n = 17)	Non-Critical Access Hospitals (n = 18)
Completely Satisfied	7	5
Mostly Satisfied	9	12
Somewhat Satisfied	1	1
Satisfied	0	0
Dissatisfied	0	0
Somewhat Dissatisfied	0	0
Mostly Dissatisfied	0	0
Completely Dissatisfied	0	0
Unsure	0	0

Although the community level of satisfaction with midlevel practitioners in the emergency department was slightly lower than that of the hospitals, the level of satisfaction remained high. The level of satisfaction was similar among communities with Critical Access Hospitals and communities with Non-Critical Access Hospitals. No community was less than somewhat satisfied with midlevel practitioners in the emergency department and no community was dissatisfied with midlevel practitioners in the emergency department.

Graph 3



Thirteen or 39 percent of Critical Access Hospitals and 30 or 54 percent of Non-Critical Access Hospitals have never utilized midlevel practitioners to staff their emergency departments.

Table 5. Reasons hospitals would not consider utilizing midlevel practitioners in the ED

	Critical Access Hospitals (n = 13*)	Non-Critical Access Hospitals (n = 30*)
Had not previously considered it	0	4
Unable to recruit midlevel practitioner	0	0
Lack of community support	2	3
Lack of physician support	9	11
Unsure	1	2
Other	2	12

*some facilities gave more than one response

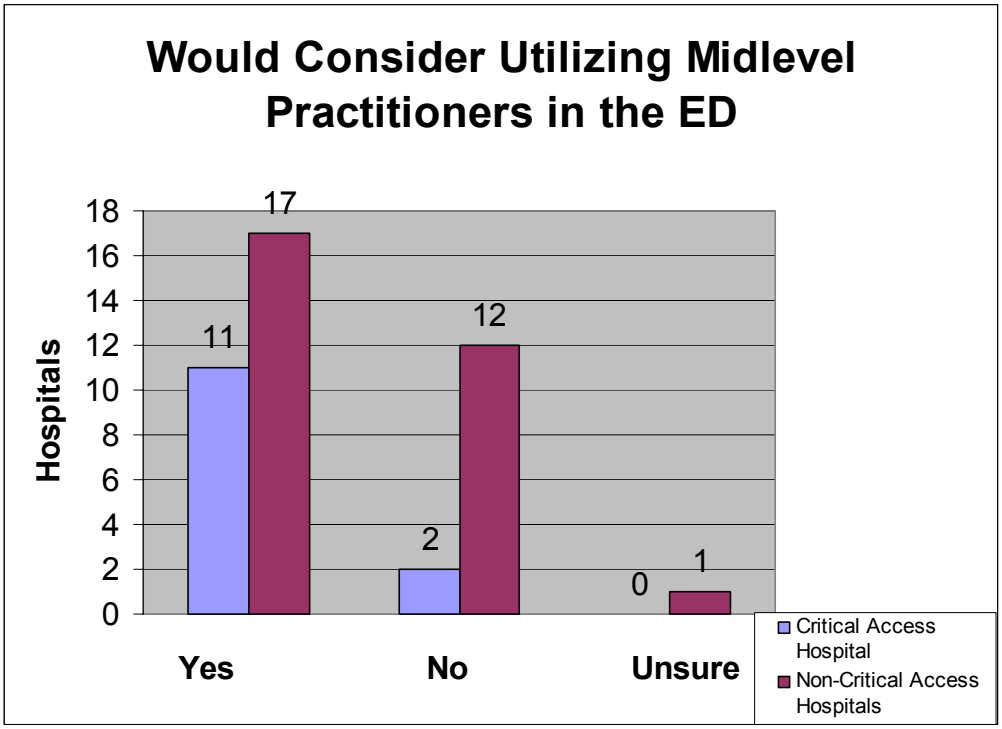
Among all hospitals in the survey, lack of physician support was the single most reported reason why they were not currently utilizing midlevel practitioners to staff emergency departments. Sixty nine percent or 9 of 13 Critical Access Hospitals reported they don't utilize midlevel practitioners in the emergency department due to lack of physician support. Lack of community support was a distant second at 15 percent.

While not as significant as with Critical Access Hospitals, lack of physician support did play a role in the decision of Non-Critical Assess Hospitals not to use midlevel practitioners to staff the emergency departments. Thirty seven percent or 11 of 30 Non-Critical Access Hospitals reported that the lack of physician support was reason why do not utilize midlevel practitioners.

Non-Critical Access Hospitals listed a variety of reasons under "other" to explain the reasons behind not utilizing midlevel practitioners. Included in this category were; four that preferred MDs, reputation of service, standards of care, not with current patient levels, not as effective of MDs, MD coverage is necessary, teaching facility and midlevel practitioners are not qualified to teach residents, and only utilize midlevel practitioners in urgent care setting. Thirteen percent had not previously considered utilizing them and ten percent reported lack of community support for the reason they had not previously utilized midlevel practitioners to staff the emergency department.

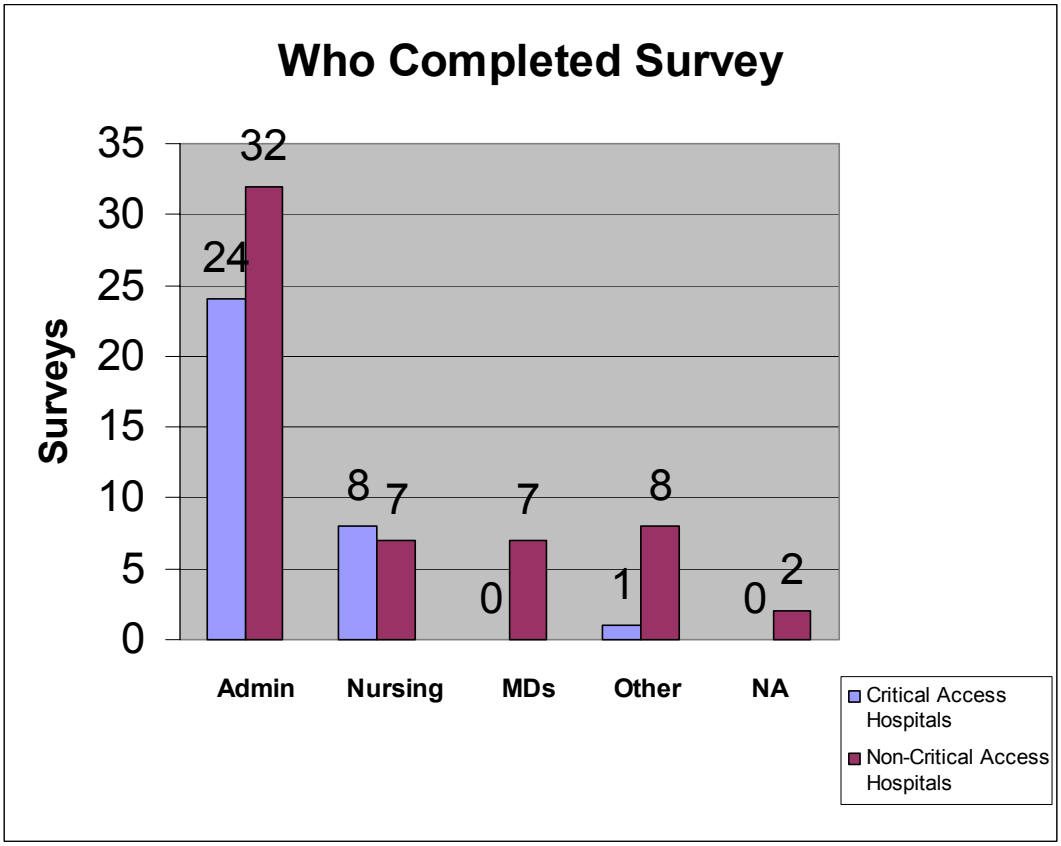
Only one Non-Critical Access Hospital discontinued utilizing midlevel practitioners in their emergency department due to dissatisfaction with their work. No Critical Access Hospital discontinued use of midlevel practitioners due to dissatisfaction.

Graph 4



Despite the reasons why hospitals had not previously utilized midlevel practitioners in the emergency department, many reported they would consider it. Eighty five percent or 11 of 13 Critical Access Hospitals reported they would consider utilizing midlevel practitioners to staff the emergency departments. A slightly lower number, 57 percent or 17 of 30 Non-Critical Access Hospitals would consider utilizing midlevel practitioners.

Graph 5



Those completing the survey were placed in five different employment categories. The majority of surveys were completed by administrative personnel and a smaller percentage was completed by nursing personnel. While there were seven physicians who completed the survey for Non-Critical Access Hospitals, no physicians completed the survey for Critical Access Hospitals. This may have played a factor in the overall results especially if the physician completing the survey held a bias towards the use of midlevel practitioners in the emergency department.

Since recruiting and retaining medical staff has been identified as a barrier to health care in rural communities, the survey also contained questions regarding recruitment. One third of Critical Access Hospitals have had difficulty recruiting medical staff in the past. At the time of the survey, only three Critical Access Hospitals were recruiting additional medical staff. Two were recruiting only physicians and one was recruiting both physicians and midlevel practitioners.

In comparison, only six Non-Critical Access hospitals have had difficulty recruiting medical staff in the past. Fifteen Non-Critical Access Hospitals were recruiting additional medical staff. Twelve were recruiting only physicians and three were recruiting both physicians and midlevel practitioners.

It should be noted that the use of midlevel practitioners in the urgent care department was not evaluated in this study. This could be significant, especially for Non-Critical Access Hospitals since many have both an emergency department and an urgent care department. It could be that Non-Critical Access Hospitals are utilizing midlevel practitioners in the urgent care yet not in the emergency department.

Discussion

The purpose of this study was to determine if Critical Access Hospitals in Minnesota are more likely to utilize midlevel practitioners to staff the emergency department than Non-Critical Access Hospitals in Minnesota. The survey results show that 52 percent of Critical Access Hospitals in Minnesota utilize midlevel practitioners to staff the emergency department compared to the 32 percent of Non-Critical Access Hospitals in Minnesota.

The high percentage of both Critical Access and Non-Critical Access hospitals that would consider utilizing midlevel practitioners suggests there is interest in increasing utilization of the midlevel practitioners in emergency departments. This combined with the high percentage of hospitals that don't utilize midlevel practitioners due to lack of physician support suggests there needs to be more information made available to hospital administration and physicians.

Conclusions

The results of the survey support the research hypothesis, "Critical Access Hospitals in Minnesota are more likely to utilized midlevel practitioners to staff the emergency department than Non-Critical Access Hospitals in Minnesota".

Implications

The results of this study could have a significant impact for rural hospitals facing the prospect of reducing the hours of or even eliminating their emergency department due to financial concerns or lack of medical staff. A Critical Access designation for rural hospitals provides a higher rate of reimbursement which can help reduce the financial

burden on the hospital. Since salaries of midlevel practitioners are generally significantly lower than physicians, utilizing midlevel practitioners to staff the emergency department could be an option for all hospitals, but in particular, rural hospitals. This option would allow rural hospitals to meet the health care needs of the community while offering a financially feasible alternative for staffing the emergency department, especially when other options are not available.

This study showed that the level of satisfaction of those Minnesota hospitals currently utilizing midlevel practitioners in the emergency department is high as is the level of satisfaction within the communities. This suggests that rural communities would likely support the move to staff emergency departments with midlevel practitioners, especially when faced with the potential reduction or elimination of services available to them.

Recommendations

It is recommended that the results of this study be made available to the hospitals in Minnesota as some hospitals, particularly rural hospitals, may be unaware that they can utilize midlevel practitioners to help staff their emergency departments. Although rural hospitals are likely to benefit more from the study results, the information should be made available to all Minnesota hospitals.

The results of this study will be presented to the Minnesota Office of Rural Health and Primary Care to provide information to those facilities considering utilizing midlevel practitioners to staff the emergency department. The study results are meant to provide information necessary to assist them to make an informed decision regarding the use of midlevel practitioners.

The role of educator is likely to fall on the Minnesota Office of Rural Health and Primary Care. One goal should be to distribute information to health care facilities in both rural and urban areas throughout the state. This office could also serve as a resource for information for those who have questions regarding the use of midlevel practitioners in emergency departments.

It is recommended that once the information and additional education regarding use of midlevel practitioners is provided to both hospital administration and physicians, the study should be repeated in three to five years. That study would be used to determine the impact the education has had on the emergency department staffing practices of Minnesota hospitals. It would also be used to determine if the staffing practices of Minnesota hospital emergency departments have changed and if there continues to be a difference in the use of midlevel practitioners in Critical Access Hospitals and Non-Critical Access hospitals.

Although this study does not specifically address the rural health care loan forgiveness program, it is recommended a study be done to determine if midlevel practitioners would be more likely to practice in rural emergency departments if they

were eligible for loan forgiveness. If the results of the study revealed that this would increase the number of midlevel practitioners willing to work in rural areas, the program should be re-evaluated to consider including midlevel practitioners working in rural emergency departments.

Some of these barriers could be reduced if financial incentives were offered. One possible option would be to make the rural health care loan forgiveness program available to those midlevel practitioners willing to work in rural emergency departments. This option would provide a financial incentive to the practitioner without causing a financial burden on rural hospitals.

It is further recommended that the use of midlevel practitioners in the urgent care be evaluated in a subsequent study. This could be done in combination with the re-evaluation of the emergency department in three to five years or could be done sooner alone or in combination with a relevant study. A study including the urgent care department would help present a more complete picture of the use of midlevel practitioners in hospital based out patient acute care settings.